

**Flexibla tätskikt – Bestämning av dimensions-
stabilitet –**

Del 1: Bitumenbaserade tätskikt för tak

**Flexible sheets for waterproofing – Determination
of dimensional stability –**

Part 1: Bitumen sheets for roof waterproofing

Europastandarden EN 1107-1:1999 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 1107-1:1999.

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Abdichtungsbahnen - Bestimmung der Maßhaltigkeit - Teil 1: Bitumenbahnen für Dachabdichtungen

This European Standard was approved by CEN on 11 July 1999.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 254 "Flexible sheets for waterproofing", the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2000, and conflicting national standards shall be withdrawn at the latest by September 2001.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

This European Standard is intended for the characterisation and/or classification of bitumen sheets as manufactured or supplied before use. The test method relates exclusively to products, or to their components where appropriate, and not to waterproofing membrane systems composed of such products and installed in the works.

This test is intended to be used in conjunction with European Standards on product specification for reinforced and unreinforced bitumen sheets for roofing.

This test is intended to determine the dimensional changes in bitumen sheets as a result of production-induced internal stresses released under the effect of heat. Excessive dimensional changes can result in detrimental stresses in service.

This test can be used to measure basic properties of the bitumen sheeting directly relevant to its fitness for purpose for waterproofing applications.

1 Scope

This European Standard specifies the determination of the dimensional stability of bitumen sheets.

2 Normative references

This European Standard incorporates by dated or undated references provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

ISO 5725 : 1986 Precision of test methods - Determination of repeatability and reproducibility for a standard test method by inter-laboratory tests.

3 Definitions

For the purposes of this standard the definitions indicated in 3.1 and in the corresponding European Standards on product specifications apply.

3.1 dimensional change: The change in length of unrestrained test specimens taken from the bitumen sheet in the longitudinal direction when subjected to a specific thermal load. It is given as a percentage (%) relative to the initial length.

4 Principle

Test specimens taken from the test sample are subjected to a specified heat load to permit any internal stresses to be relaxed. The resulting dimensional change is measured using an optical or mechanical method (see clauses 5, 7 and 9).

5 Apparatus

5.1 General

Two alternative measuring methods can be used:

a) Optical method (method A):

This method is based on optical measurement of the distance between the marks before and after exposure to a heat load (see figure 1).

b) Calliper method (method B):

This method is based on measuring the change in distance between two measuring marks using a calliper [= extensometer] (see figure 2).

5.2 Apparatus for methods A and B

5.2.1 Oven with circulating air (without fresh air supply), adjustable to (80 ± 2) °C.

5.2.2 Thermocouple, connected to an external electronic thermometer capable of measuring to ± 1 °C in the temperature range.

5.2.3 Steel plate, (approximately 280 mm x 80 mm x 6 mm) with cut outs. This is used as a template for local removal of the coating and for flattening the test specimen when locating the measuring marks and during the measurement itself (see figure 1 and figure 2).

5.2.4 Glass plate, coated with talcum powder.

5.3 Apparatus for method A (optical method)

5.3.1 General

In addition to 5.2 the apparatus indicated in 5.3.2 to 5.3.7 is required.

5.3.2 Beam compass, made of steel, with dimensions of approximately 25 mm x 10 mm x 250 mm with a fitted centring cone (diameter approximately 8 mm, height approximately 12 mm, cone angle approximately 60°) and interchangeable scribing pin (tip diameter approximately 0,05 mm) a distance of $L_A = (190 \pm 5)$ mm from the cone axis (see figure 1).

5.3.3 M5 nuts or similar measuring marks as the measuring base.

5.3.4 Aluminium tags, (approximately 30 mm x 30 mm x 0,2 mm) to receive the measuring marks.

5.3.5 Office stapler, for fastening the aluminium tags.

5.3.6 Length measuring device, measuring length at least 250 mm, with a scale division of at least 1 mm.

5.3.7 Precision length measuring device (e.g. graduated magnifying glass), with a scale division of at least 0,05 mm.